

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

What is claimed is:

1. - 21. (Canceled)

22. (Currently Amended) A method of differentially updating an image of stored data in a mobile terminal from a first data version to an updated data version, the method comprising the steps of:

~~loading differential update instructions into a flash memory of the mobile terminal;~~
~~generating an updated data version from the stored data and the loaded differential update instructions; and~~

detecting whether the image of stored data in [[the]] a flash memory of the mobile terminal includes one or more corrupted memory blocks having stored therein data that is inconsistent with the first data version; [[and]]

receiving dedicated differential update instructions, wherein

the dedicated differential update instructions comprise differential update instructions used to generate the updated data version and differential update instructions used to repair the data that is inconsistent with the first data version,
and

the dedicated differential update instructions are generated in response to detecting the image of stored data in the flash memory of the mobile terminal includes one or more corrupted memory blocks having stored therein data that is inconsistent with the first data version; and

loading the dedicated differential update instructions into the flash memory of the mobile terminal;

repairing, when generating the updated data version, any such detected corrupted memory block; wherein the image of stored data in the flash memory is updated in-place such that data of the first data version is reused and reorganized to generate the updated data version.

23. (Previously Presented) The method according to claim 22, further comprising generating the differential update instructions based on information about detected corrupted memory blocks, if any.

24. (Previously Presented) The method according to claim 23, wherein the differential update instructions include update data and the step of generating the updated data version further comprises the step of replacing data stored in predetermined one or more memory blocks by the update data.

25. (Previously Presented) The method according to claim 24, wherein the update data includes one or more repaired memory blocks of data consistent with the updated data version, the one or more repaired memory blocks of data corresponding to the detected one or more corrupted memory blocks of data, if any.

26. (Previously Presented) The method according to claim 23, wherein the step of generating the differential update instructions further comprises the step of generating instructions by the processor of the mobile terminal to cause the processor of the mobile terminal to generate the updated data version from the image of the stored data, excluding any detected one or more corrupted memory blocks from the differential update instructions.

27. (Previously Presented) The method according to claim 23, wherein the step of generating the differential update instructions is performed by a remote data processing system.

28. (Previously Presented) The method according to claim 27, further comprising the step of the mobile terminal and the remote data processing system communicating via a wireless communications link.

29. (Previously Presented) The method according to claim 28, further comprising the step of the mobile terminal and the remote data processing system communicating via an Internet Protocol.

30. (Previously Presented) The method according to claim 27, wherein the step of detecting is performed by the mobile terminal and the detecting further comprises the step of transmitting information about the detected one or more corrupted memory blocks from the mobile terminal to the remote data processing system.

31. (Previously Presented) The method according to claim 27, wherein the method further comprises the step of transmitting information about the image of the stored data from the mobile terminal to the remote data processing system and wherein the step of detecting is performed by the remote data processing system from the transmitted information.

32. (Previously Presented) The method according to claim 22, wherein the step of detecting further comprises the steps of:

calculating a number of checksums by the processor of the mobile terminal, wherein each checksum corresponds to a corresponding memory block of data stored in the flash memory of the mobile terminal; and

comparing the calculated checksums with a number of reference checksums to identify any corrupted memory block of data.

33. (Previously Presented) The method according to claim 32, wherein the reference checksums are stored in the flash memory of the mobile terminal and further comprising the step of performing the step of comparing by the mobile terminal.

34. (Previously Presented) The method according to claim 33, further comprising the step of integrity protecting the reference checksums stored in the mobile terminal by a message authentication code.

35. (Previously Presented) The method according to claim 32, further comprising the steps of:

storing the reference checksums on a remote data processing system wherein the transmitted information comprises the calculated checksums; and

wherein the detecting step further comprises the step of comparing the transmitted calculated checksums by the remote data processing system with the number of reference checksums stored on the remote data processing system.

36. (Previously Presented) The method according to claim 32, wherein the calculating step further comprises the step of calculating the checksums as a cryptographically strong one-way hash function of the corresponding memory block of the image of the stored data.

37. (Currently Amended) A mobile terminal comprising:
a flash memory for storing an image of data;

communications means adapted to receive from a data processing system dedicated differential update instructions for updating the image of data stored in the flash memory from a first data version to an updated data version;

processing means adapted to generate the updated data version from the image of the stored data and from the received dedicated differential update instructions, wherein the processing means is further adapted to:

generate information from the image of the stored data indicative of the presence ~~or absence~~ of one or more corrupted memory blocks having stored therein data that is inconsistent with the first data version;

communicate the generated information via the communications means to the data processing system for generating the dedicated differential update instructions, wherein

the dedicated differential update instructions comprise differential update instructions used to generate the updated data version and differential update instructions used to repair the data that is inconsistent with the first data version, and

the dedicated differential update instructions are generated in response to the data processing system receiving the information from the image of stored data indicative of the presence of one or more corrupted memory blocks having stored therein data that is inconsistent with the first data version; and

repair any such detected corrupted memory block; wherein the image of stored data in the flash memory is updated in-place such that data of the first data version is reused and reorganized to generate the updated data version.

38. (Currently Amended) A data processing system for facilitating differentially updating an image of stored data in a mobile terminal from a first data version to an updated data version, the data processing system comprising:

means for loading dedicated differential update instructions into a flash memory of the mobile terminal, the dedicated differential update instructions causing a processor of the mobile terminal to generate the updated data version from the an image of stored data and the loaded dedicated differential update instructions;

the data processing system further comprising:

means for receiving information from the mobile terminal indicative of the presence ~~or absence~~ of one or more corrupted memory blocks wherein the image of stored data is inconsistent with the first data version; and

processing means adapted to generate the dedicated differential update instructions from the first and updated data versions and from received information, wherein

the dedicated differential update instructions comprise differential update instructions used to generate the updated data version and differential update instructions used to repair the data that is inconsistent with the first data version, and

the dedicated differential update instructions are generated in response to receiving information from the mobile terminal indicating that the image of stored data in the flash memory includes one or more corrupted memory blocks having stored therein data that is inconsistent with the first data version; and

~~include repair instructions into the differential update instructions,~~ wherein the ~~repair instructions~~ differential update instructions used to repair the data that is inconsistent with the first data version are adapted to cause the processor of the mobile terminal to repair any such detected corrupted memory block; wherein the image of stored data in the flash memory of the mobile terminal is updated in-place such that data of the first data version is reused and reorganized to generate the updated data version.

39. (Currently Amended) A computer program comprising program code means embodied on a computer readable medium to be loaded into a flash memory means and executed by a processor means and adapted to cause a mobile terminal to differentially update an image of stored data in the flash memory of the mobile terminal from a first data version to an updated data version by performing the following steps, when the computer program is executed by the processor means on the mobile terminal:

generating information from the image of stored data indicative of the presence ~~or absence~~ of one or more corrupted memory blocks having stored therein data that is inconsistent with a first data version;

loading dedicated differential update instructions into the processor of the mobile terminal, wherein

the dedicated differential update instructions comprise differential update instructions used to generate the updated data version and differential update instructions used to repair the data that is inconsistent with the first data version, and

the dedicated differential update instructions are generated in response to the information from the image of stored data indicative of the presence of one or more corrupted memory blocks having stored therein data that is inconsistent with the first data version; and

generating the updated data version by the processor of the mobile terminal from the stored data and the loaded dedicated differential update instructions, including repairing any such detected corrupted memory block; wherein the image of stored data in the flash memory of the mobile terminal is updated in-place such that data of the first data version is reused and reorganized to generate the updated data version.

40. (Currently Amended) A computer program comprising program code means embodied on a computer readable medium to be loaded into a memory means and executed by a processor means and adapted to cause a data processing system to facilitate differentially updating an image of stored data in a flash memory of a mobile terminal from a first data version to an updated data version by performing the following steps, when the computer program is executed by the processor on the data processing system:

generating dedicated differential update instructions from the first and updated data versions and from information received from the mobile terminal, wherein the received information is indicative of the presence ~~or absence~~ of one or more corrupted memory blocks having stored therein data that is inconsistent with the first data version, wherein generating

the dedicated differential update instructions comprise[[s]] including repair instructions into the differential update instructions differential update instructions

used to generate the updated data version and differential update instructions
used to repair the data that is inconsistent with the first data version, and

the dedicated differential update instructions are generated in response to
receiving the received information; and

loading the generated dedicated differential update instructions into the flash memory of the mobile terminal, the dedicated differential update instructions causing the processor of the mobile terminal to generate the updated data version from the stored data and the loaded dedicated differential update instructions, wherein the image of stored data in the flash memory of the mobile terminal is updated in-place such that data of the first data version is reused and reorganized to generate the updated data version.

41. (Previously Presented) The mobile terminal according to claim 37, in combination with a mobile communications network.

42. (Previously Presented) The method according to claim 23, wherein the step of generating the differential update instructions is performed by a processor of the mobile terminal.

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